



Miami-Dade Water and Sewer Department Business Plan

Fiscal Years: 2013 and 2014
(10/1/012 through 9/30/14)

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DEPARTMENT OVERVIEW

Department Mission

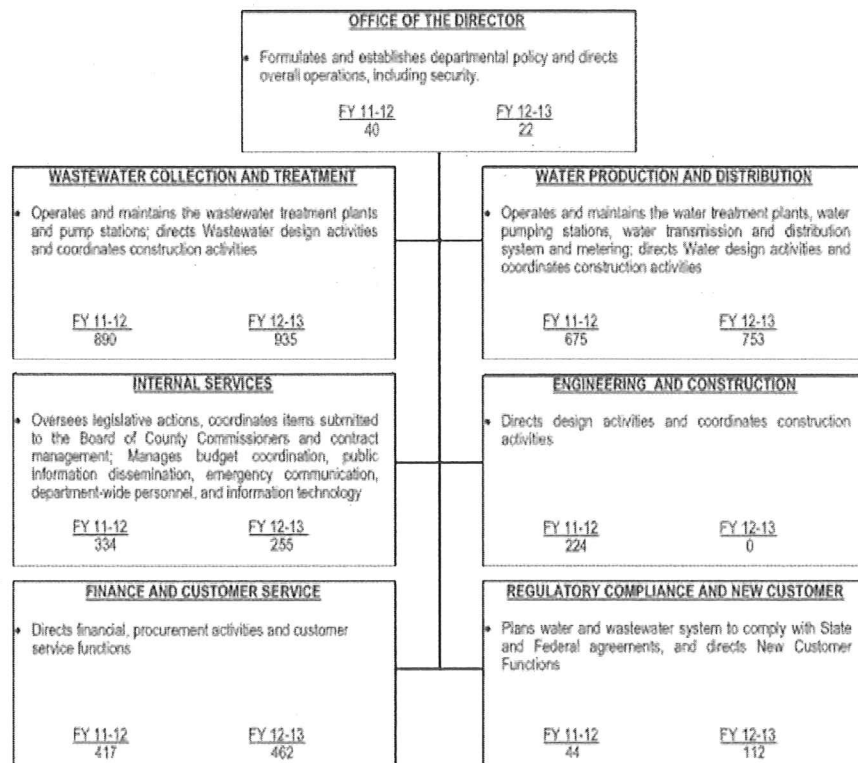
The Miami-Dade Water and Sewer Department is committed to serving the needs of Miami-Dade County residents, businesses, and visitors by providing high-quality drinking water and wastewater services while providing for future economic growth via progressive planning; implementing water conservation measures; safeguarding public health and the environment; and providing for continuous process improvements and cost efficiencies.

Department Description

Miami-Dade Water and Sewer Department's (MDWASD) principal responsibilities are to provide potable water and wastewater services. This includes water supply, transmission, treatment, distribution, conservation, and wastewater collection, treatment, disposal, and water reclamation. MDWASD is one of the largest public utilities in the United States, serving approximately 424,764 retail water customers and 342,539 retail sewer customers, and 15 wholesale (municipal) water customers and 13 wholesale (12 municipal and the Homestead Air Force Base) sewer customers on a daily basis. The total combined population served at the retail and wholesale level is about 2.3 million residents.

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Strategic Alignment Summary

The Department is aligned to the following Strategic Plan goals and objectives:

NI1: Responsible growth and a sustainable built environment

NI1-1 Promote mixed-use, multi-modal, well designed and sustainable communities

NI2: Effective Infrastructure Services

NI2-1 Provide adequate potable water supply and wastewater disposal

ED5: Revitalized communities

ED5-1 Provide adequate public infrastructure that is supportive of new and existing businesses

ED5-2 Develop urban corridors (TUAs, CRAs, Enterprise Zones, NRSAs) as destination centers

GG1: Friendly Government

GG1-1 Provide easy access to information and services

GG1-2 Develop a customer-oriented organization

GG3: Efficient and effective service delivery through technology

GG3-1 Ensure available and reliable systems

GG3-2 Effectively deploy technology solutions

GG4 Effective Management Practices

GG4-1 Provide sound financial and risk management

GG4-2 Effectively allocate and utilize resources to meet current and future operating and capital needs

Our Customer

MDWASD serves approximately 424,764 retail water customers and 342,539 retail sewer customers, and 15 wholesale (municipal) water customers and 13 wholesale (12 municipal and the Homestead Air Force Base) sewer customers on a daily basis. The total combined population served at the retail and wholesale level is about 2.3 million residents. Developers are also customers as they seek development permits that include water and sewer capacity and infrastructure. Customers internal to the County include all departments with facilities that are served by MDWASD.

The most important needs of our customers are to obtain potable water and dependable wastewater services at the lowest available cost. The Department has been improving customer service to all the customer groups, including retail and wholesale customers.

Miami-Dade County has undertaken surveys of customers from the development, construction, building, and related industries. The surveying mostly takes place at the Miami-Dade Permitting and Inspection Center (MDPIC) in west Miami-Dade. This center, known as the "MDPIC," is a one-stop location for the building industry to seek permits and as such, the

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surveys taken there are based on voluntary participation and usually cut across various departments. MDWASD's New Customer Division has been part of the customer service improvement effort at the MDPIC. During FY 2011-12, 82% of respondents at the MDPIC location, perceived that MDWASD provided an "Often Excellent" customer service. Customer service surveys conducted at MDWASD'S New Business Office (LeJeune) indicated that 100% of survey respondents rated services as "Often Excellent." Customer feedback is being used to continuously improve customer service at all locations.

To ensure customer satisfaction and compliance with County Ordinances, the New Customer Division has integrated with Regulatory and Economic Resources (RER) electronic plans review system for concurrent plans processing review (CPP) and plans dropped-off. The Department continues to build positive relationships with municipalities and wholesale customers through public outreach and process improvement efforts with building officials. Concurrent electronic plans review processing has been established with the City of Miami Beach and efforts are underway to do the same with the City of Hialeah.

The drive to better serve our customers is strongly visible in the various customer service initiatives implemented by the Retail Customer Division. To further enhance communication, the Department distributes multiple door hangers (notices) designed to provide customers with clear, concise, and user-friendly information regarding upcoming projects in their respective neighborhood. Furthermore, a new "High Bill" notification letter was created and distributed to inform customers of potential problems.

The Department takes the initiative to investigate unusually high-level water consumption by contacting the customer before a billing statement is issued. A field representative schedules an on-site appointment with the customer to examine possible causes. If a problem is found, it is documented by the field representative and the customer is provided with information as to what actions can be taken. The Department recently amended its Rules and Regulations to extend a bridge account to one year for tenant groups in multi-unit rental dwellings. The bridge account affords tenants the ability to pay for water and sewer services until such time as the property owner re-established their account or the tenants re-locate. The Order provides the tenants time (one year) to pursue applicable legal remedies, find other living arrangements, or provides the customer enough time to resolve the issue and re-establish water service. Most families cannot come up with the necessary funds to relocate immediately, so this provides the tenants with time to make plans and/or seek assistance.

The Customer Service Centers are open to handle walk-in customer transactions. In an effort to improve the customer experience, a series of improvements have been instrumental in facilitating the customer walk-in process. Before the new process was implemented, a customer would arrive and obtain a number for service and wait until someone was available. Many times, the issue could be resolved online and the customer did not need to wait to be called. Now, an experienced Customer Service Coordinator immediately makes initial contact with the customer to determine what assistance is needed. The coordinator will assist customers with minor issues, thereby alleviating the customer with waiting to see a representative. Also, customers are provided the option of using the kiosks in the Customer Service Center to conduct their business. Many customer service issues can now be resolved online without having to wait for a representative. When customers are addressed immediately, they appreciate the value the Department places on their time.

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Improved customer signage and public notification; "I Love Tap Water" branding; and the creation of customer feedback forms have also enhanced the customer experience. Customer feedback cards are used to assess the strengths, weaknesses, and then adjust the business process or training of staff with the focus of improving the customer experience. Customer feedback cards will be redesigned to target walk-in customers to determine the reason for their visit. Many customers are able to resolve their issues online, over the telephone, or by fax without having to come into one of our Customer Service Centers. By knowing the specific reason for their visit, staff can craft specific outreach efforts to educate and inform our customers on the many different ways to conduct business with the department, specifically through online services.

The website has also become a central point for customers to conduct business with the department. The website was redesigned to improve customer contact and transactions. When a customer submits the request via e-mail, there is an immediate auto response that replies that the request has been received. Furthermore, informational videos (currently posted on the Miami-Dade County portal and YouTube) promote tap water, the proper disposal of grease, how to read your meter, and how to check for leaks.

MDWASD provides direct customer outreach and advertising via radio, television, print, transit bus benches, movie theatres, publications, the internet about water quality, conservation programs, and customer service programs and services. A greater emphasis is placed on promoting the use of online services. Customers can pay their bill online, request paperless billing, check their usage, and request new service and disconnection, all with the click of the mouse. Advertising these services continues to be a top priority of the department in an effort to facilitate the customer service experience. The department participates in numerous outreach events such as workshops, showerhead exchanges, targeted group and school meetings, and various commissioner-sponsored events.

MDWASD builds positive relationships with municipalities and wholesale customers through industry meetings, face-to-face interaction, training sessions, and business process reviews. As part of the performance improvement efforts, the department developed a Customer Focus Committee to identify customer needs, evaluate our performance, and implement initiatives to improve customer satisfaction. As a result, in December 2010, the Department developed a customer-complaint tracking system. The database is a repository for customer complaint data that is utilized to identify areas for improvement and implement proactive strategies.

KEY ISSUES

- The age of more than half of the existing water and sewer infrastructure, including its six major treatment plants and more than 14,000 miles of pipelines, is nearing or exceeding fifty years. For many years, maintenance has been deferred to avoid short term cost impacts, resulting in expensive equipment failures such as water and sewer main breaks, plant failures, and decreased efficiency of operation. In some instances, fines and penalties have been imposed by regulatory agencies as a result of these failures. The dramatic failure of large diameter water and sewer mains during the past two years requires dedicated attention to the evaluation, repair, and replacement of

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this critical infrastructure. Fines and penalties are anticipated to rise as regulatory agencies are determining that the causes of recent failures are the result of inadequate maintenance. The Department has identified more than \$12.6 billion of water and sewer main replacement work that is needed to address deteriorated and inadequate piping throughout the system.

- Regulatory requirements in the form of consent decrees, agreements, permit conditions, and statutory changes continue to create a series of unfunded mandates that can only be met through extensive capital investment. Chief among these are state laws requiring abandonment of two ocean outfalls for treated wastewater disposal, and associated requirements for wastewater reclamation and reuse, a federal consent decree requirement for managing peak wastewater flows, numeric nutrient criteria, more stringent water quality standards, compliance with requirements of Operation and Maintenance of Public Water Systems, including the removal of lead components in water services, and on use of the Biscayne Aquifer to meet future water supply needs. Although some requirements were recently reduced, the ocean outfall legislation has significant cost and rate implications. Said legislation, which took three years to pass through diligent efforts, will result in a \$1 billion cost avoidance to the County. Currently, a new federal consent decree is being negotiated with the Environmental Protection Agency to focus on needed wastewater system upgrades and maintenance to reduce pipeline and plant equipment failures. This consent decree will address capacity, management, operations and maintenance (CMOM) issues and will include a list of specific capital projects to be completed in 15 years, at a cost of \$1.56 billion. These projects are included in the FY 2012-13 Adopted Capital and Multi Year Plan. In addition, the Department has to be in compliance with new licensing requirements for operation and maintenance of the water distribution system.
- While economic conditions are down, there are signs of increased development activity, particularly in the downtown area. This will require greater attention to adding system capacity to stay ahead of growth needs and to avoid localized building restrictions where sewer pump stations do not remain in compliance with state and federal operational standards. An improving economy is likely to increase the cost of construction for needed facilities and increase the competition for staff resources. Trained staff will be needed to keep up with the increased activity.
- Addressing the customer service is a priority for the Department. The Customer Service Unit handles over 579,000 calls annually and there is a customer wait-time exceeding thirteen (13) minutes. It is necessary to hire twelve (12) full-time positions to improve the response time. In addition, the New Customer Division, which collected over \$20 million in FY2011-2012, has seen a recent surge in customer requests. As such, at this time three (3) full-time positions are required to staff the Permitting Inspection Center (PIC) and Overtown Transit Village (OTV) to improve compliance with county ordinance 4-115 for residential and commercial initial project review time; and to begin staffing a one-stop shop for financial and technical review process for developmental projects at these new satellite offices. The current workload for project review has increased significantly thereby causing a delay beyond the five (5) days required by the ordinance. Additional positions may be requested through overages or the budget process.

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- Addressing the infrastructure, regulatory, and capacity needs of the system will have significant staffing implications. Also, the alarming number of vital staff, executives, and management preparing for retirement needs to be addressed to ensure appropriate transfer of knowledge. In an effort to address some concerns, various cross training has been implemented, including the donation inspectors and construction managers in the Construction Contracts Division.
- Increasing the efficiency of all functions that depend on the efficiency of other departments can save substantial time and resources. This is particularly the case with procuring equipment and services unique to operations. Replacement of aging and worn out equipment and vehicles is necessary to provide the resources needed to address the future demands of repairs to aging infrastructure, as well as reduce the downtime and costly recurring repairs. Two successful examples of approaches that have demonstrated improved efficiencies are capital projects managed under the expedited process and the use of pre-qualified consultant and contractor pools to limit the time required to address emergency situations and for smaller construction projects. Meeting MDWASD's infrastructure needs and regulatory requirements implies the need for greater efficiencies in project implementation and more intensive project management to maintain schedules and quality control as the number of projects increases to meet regulatory schedules.
- Systems automation for most aspects of operations, including budget and accounting, customer information, geographic information systems, enterprise asset management, system control data, project tracking, security, and metering requires constant attention, training, and funding. This is particularly critical as many long term Department employees retire and take with them their extensive system knowledge that needs to be captured and made accessible throughout the organization. Technology changes are introduced by hardware and software suppliers, as well as internal business improvements, regulations, and expanded customer expectations. Although newer technology is often better than current tools, it places a burden on both the workforce adapting to the change and the Information Technology team delivering the support that must be managed. Orchestrating these changes require significant planning to ensure a smooth transition. These systems require continuous maintenance and training to be effective.
- Adequate funding and appropriate rates are required in order to implement the Business Plan. The regulatory requirements, including the 20-Year Water Use Permit conditions, state mandated ocean outfall abandonment requirements, consent decrees, other regulatory requirements, and the need to replace the aging infrastructure, require significant increases in funding. The newly negotiated United States Department of Environmental Protection (EPA) Consent Order consists of sewer system rehabilitation and improvement projects that have been identified and estimated at \$1.56 billion. These projects will require adjustments to the projected rates. This funding is dependent on the water and sewer rates, which rely solely on the customers who have benefited from low rates for many years.

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- Additionally, the Department needs to maintain and moderately replenish non-required reserve levels in order to reduce the cost of issuing debt for all capital needs. Rating agencies have expressed concerns that the Department will not be able to increase rates to meet future demands. Also, the rating agencies could see a decline in fund balance (reserves) as a negative indicator and may revise the Department's debt outlook or bond ratings. Rating agencies already noted that the lower the level of reserves, the greater the risk that the Department will be unable to respond to unexpected events.

PRIORITY INITIATIVES

- Ensure compliance with the revised 20-year Water Use Permit (WUP) including, but not limited to, the High Level Disinfection (HLD) process at the South District Wastewater Treatment Plant (SDWWTP), the Northwest Wellfield Surface Water Treatment Plant (WTP) for the Hialeah/Preston service area, the alternative water supply (AWS), water conservation, water loss reduction projects, adequate wastewater transmission capacity, groundwater studies for the North and SDWWTPs, Infiltration and Inflow Program, the comprehensive water and wastewater master plan to address the State Outfall Legislation, and the Cross Bay Line Relocations project at Government Cut.
- Provide adequate water and wastewater capacity to support development, by continuing with the implementation of the water supply certification program, water and wastewater capacity analysis, and expedite the implementation of remedial plans for sewer pump stations under moratorium, which are located in areas with higher potential for development. Due to the excessive amount of rainfall experienced this year, an unusual number of pump stations have gone out of compliance leaving large areas of the County under a development moratorium. Moratoria impede the economic development in the service areas of these pump stations. The purpose of this initiative is to quickly and effectively reduce the number of out-of-compliance pump stations in order to provide better service to the public.
- Establish a bond-funded program specifically targeting critical infrastructure replacement to reduce the instances of pipeline and plant component failures that can endanger public health, create economic disruption, and substantially increase the cost of facility management.
- Ensure implementation of the projects in the Multi-Year Capital Plan to provide adequate facilities to meet capacity requirements and infrastructure renewal and replacement as well as the support systems associated with implementation.
- Implement a comprehensive Lead Service Replacement Program to systematically eliminate lead from water service piping and fittings in compliance with state and federal regulations.

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- Continue to operate and use the methane gas generated at the landfill for conversion into electricity at the SDWWTP.
- Continue implementation of the "Water and Sewer Infrastructure Service Improvement Plan" to encourage and support applicable homeowners notified of required connection by County Code. This is in support of Regulatory and Economic Resources (RER) efforts to reduce permitting time, providing well intrusions to property owners required to connect to the water and/or sewer system, improves water and sewer infrastructure's operation, and avoids future pavement cuts and traffic disruptions at the time the customer requests connections. Developers installing services and laterals will be compensated by a set fee. Continue and expand the integration between New Customer Division (private development work) and Engineering Division Utility Coordination (public right of way agencies' work) by use of the Geographic Information System (GIS) system and coordination with roadway agencies to minimize pavement cuts and traffic disruption within our service area.
- Ensure implementation of key support systems such as the Supervisory Control and Data Acquisition System (SCADA), Customer Care and Billing (CCB), Mobile Workforce Management (MWM), GIS, and Project Control Tracking System (PCTS). The Financial Enterprise Resource Planning (ERP) system will be implementing its first major upgrade since it was installed in 2006. ERP and the PCTS will be expected to adapt their functionality to meet continual business changes as they serve their primary objectives for the department.
- Implement a comprehensive staffing and succession plan to mentor, train, and transfer historical knowledge to new employees before retirement of existing staff and to ensure adequate staffing of the HLD facility.
- Continue to implement efficiency initiatives, sustainability measures, process improvements, and other performance excellence initiatives through direct engagement with frontline staff to facilitate implementation of the business plan, building on the successful experience of the POWER (Partnership Optimizing WASD's Efficiency and Re-Engineering) program. This program has documented more than \$36.9 million in savings resulting from employee-driven process improvements since 1998.

FUTURE OUTLOOK

3 to 5 Year Financial Outlook

In order to implement the Business Plan, it is evident that the Department will need to obtain adequate funding to meet all the regulatory requirements, including the 20-Year WUP and conditions, state mandated ocean outfall legislation, consent decrees, other regulatory requirements, and the need to rehabilitate and replace aging infrastructure. The impact of the regulatory requirements and aging infrastructure will significantly increase the cost of water and sewer services for both retail and wholesale customers. Although retail rates were held

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flat for both FY 2011-12 and FY 2012-13, adjustments will be necessary to support the increased cost of operations and maintenance, and to fund debt issuances necessary to complete capital projects for regulatory compliance, aging infrastructure, and plant rehabilitation.

Negotiations are underway with the United States Department of Environmental Protection to address concerns related to the system infrastructure which resulted in a consent decree that will necessitate an adjustment to the capital plan and require adjustments to the projected rates. Water and wastewater rate increases will be proposed for FY 2013-14.

Miami-Dade Water and Sewer Department's Multi-Year Capital Plan includes the testing and replacement as needed of all large diameter concrete water and sewer pipes; substantial overhauls of all the water and wastewater plants; reconstruction of nine seriously deteriorated sewage pump stations and capacity expansion of more than 60 pump stations to accommodate additional flows; installation of redundant water supply mains and storage tanks to ensure continuous delivery of water even when pipe failures occur; planning and design of extensive changes to the wastewater system required to satisfy the State mandate to eliminate use of the ocean outfalls for disposal of treated wastewater and the reuse of 60% of that water; and completion of water supply projects required in the State Water Use Permit to meet service demands in the future. Customers may see a significant increase in water and sewer rates; current estimates project the increases will range between 100% to over 250% of the current rates within the next 10 years.

Nation-wide water and sewer utilities of comparable size experienced a Maintenance Index of 6.4 percent during FY 2012; based on the United States Department of Labor, Bureau of Labor Statistics, 2012 Consumer Price Index (CPI), All Urban Consumers, Water and Sewerage Maintenance U.S. City average. FY 2013 Water and Sewerage index is currently estimated at 6.3 percent. Future rate increases to retail and wholesale customers are critical to fund the Capital Improvement Plan and additional operating expenses that relate to improvements. The water system infrastructure averages 45 years with the oldest pipes in the system dating back to the mid 1920's. Similarly, the wastewater infrastructure averages 55 years with the oldest pipes in the system dating back to 1930s.

MDWASD has identified the need to replace or rehabilitate 2,594 miles of the total 6,277 miles of wastewater pipes. This is 41% of the infrastructure, at an estimated cost of \$4.9 billion. Similarly, the department has identified 160 miles of sewage pipes that needs to be rehabilitated along with an anticipated EPA Consent Decree estimated at \$1.56 billion. The Central District Wastewater Treatment Plant, built in the 1950's, processes the largest volume of sewer flows for the Department on a daily basis; the plant's age and approximation to the Atlantic Ocean continues to require extensive equipment and structural repairs to meet operational demands and regulatory requirements.

The Department's Multi-Year Capital Plan is proposing to issue \$300 million of new bonds in FY 2012-13, \$248 million in FY 2014-15, and \$471 million in FY 2015-16. In coordination with the Office of Management and Budget and the Finance Department; the Department will develop a payment schedule that will smooth out the effect of this financing through the life of the bonds.

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As is customary during the annual budget process, the Department will be looking for innovative ways to reduce the fiscal impact to the customers. The Department has started a significant effort at looking for competitive approaches to addressing these needs in the most cost effective manner while maintaining regulatory compliance. The Department continually reviews both its organizational structure and related business process in order to review costs and/or increase revenue collection. As these approaches are identified, the Department, along with the Office of Management and Budget and the Mayor's Office, will present the proposals to the BCC for final determination.